

IN THE CLAIMS

Claim 1 (Currently Amended): Method of processing, by machine, composite components (2)—comprising at least a support device (3)—and a stamp pad (4)—by means of a processing device (1), whereby, in order to process the composite component (2), at least one operating head (10)—of a material-removing unit (6)—and the composite component (2)—are moved relative to one another by means of a handling unit (7)—controlled and/or regulated by a control unit (9), ~~in particular in an XY plane,~~ and material is removed from the composite component (2) by the material-removing unit (6), wherein the stamp pad (4)—of the composite component (2)—which is at least partially joined to the support device (3) is divided into several pad parts (11) spaced at a distance apart from one another by means of a dividing gap (42)—by the material-removing unit (6). and wherein at least one effector unit, which preferably incorporates at least one dispensing unit of the ink dispenser unit and the operating head of the material-removing device, can be displaced and positioned by means of the handling unit.

Claim 2 (Currently Amended): Method as claimed in claim 1, wherein at least one cutting line (43) is defined on a processing surface (39)—of the composite component (2) by means of the control unit (9), ~~in particular on a processing surface (39),~~ and the stamp pad (4) is split into the pad parts (11) along the cutting line (43).

Claim 3 (Currently Amended): Method as claimed in claim 1, wherein material is continuously removed across a thickness (41) of the stamp pad (4), preferably along the cutting line (43), in order to form the dividing gap (42)—and a composite component (2)—with non-connected pad parts (11) is thus produced.

Claim 4 (Currently Amended): Method as claimed in claim 1, wherein once the stamp pad—(4) has been cut into several pad parts—(11), it is preferably provided with stamping ink—(47) or inking fluids by means of ~~an~~ the ink dispenser unit—(46).

Claim 5 (Currently Amended): Method as claimed in claim 4, wherein the pad parts—(11) are provided with ~~different and/or the same type, in particular differently coloured and/or identically coloured,~~ stamping inks—(47) or inking fluids.

Claim 6 (Currently Amended): Method as claimed in claim 4, wherein ink is dispensed by the ink dispenser unit—(46) in the form of ink drops—(58), which are dripped through one or more outlet orifices (55)—in the direction of at least one application point (56)—on one of the pad parts—(11).

Claim 7 (Currently Amended): Method as claimed in claim 4, wherein several application points—(56) of a pad top face—(57) of the stamp pad (4)—are fixed or pre-set by the control unit (9), ~~in particular~~ in a grid pattern.

Claim 8 (Currently Amended): Method as claimed in claim 4, wherein different types of stamping ink—(47) for the different pad parts—(11) are dispensed respectively via different outlet orifices—(55), each with a flow connection to separate housing chambers in stamping ink containers (51)—and/ or different types of stamping inks (47)—for the different pad parts (11)—are dispensed via a single outlet orifice (55)—which can be connected to several different housing chambers in stamping ink containers (51)—for different stamping ink—(47).

Claim 9 (Currently Amended): Method as claimed in claim 4, wherein several ~~different types, in particular~~ differently

coloured, stamping inks—(47) are mixed and different types or colours of stamping inks—(47), ~~in particular from the palette of the RGB, CMYK colours etc.~~, are created in readiness for application to the pad parts—(11) by, ~~for example, an additive~~ a process of mixing specifically metered quantities of stamping inks—(47).

Claim 10 (Currently Amended): Method as claimed in claim 4, wherein at least the outlet orifice—(55), ~~in particular an outlet nozzle,~~ of the ink dispenser unit (46)—is positioned ~~on the—at~~ different application points (56)—in order to dispense ink, preferably at grid points.

Claim 11 (Currently Amended): Method as claimed in claim 4, wherein ink is applied in pulses to the application points—(56) by means of one or more ink drops—(58).

Claim 12 (Currently Amended): Method as claimed in claim 4, wherein the stamping ink (47)—is dispensed by a fluid ejection from the at least one outlet orifice (55)—by briefly applying ~~an over-pressure, in particular a pressure surge, at least in the region of the outlet orifice—(55),~~ preferably in the ink containers—(51).

Claim 13 (Currently Amended): Method as claimed in claim 4, wherein the outlet orifice—(55) is sealed to prevent unintentional dispensing of ink by means of a shut-off device (70) which can be switched into a position permitting a passage by applying force and which is preferably in the closed position in the normal state, ~~in particular a check valve (71).~~

Claim 14 (Cancelled).

Claim 15 (Currently Amended): Method as claimed in claim 1, wherein surface part-regions ~~(59)~~ are set and/or can be set by the control unit ~~(9)~~ on the processing surface ~~(39)~~ of the composite component ~~(2)~~, ~~in particular the stamp pad (4),~~ after which the stamp pad ~~(4)~~ is cut, preferably into the individual pad parts ~~(11)~~ on the basis of these surface part-regions ~~(59)~~.

Claim 16 (Currently Amended): Method as claimed in claim 15, wherein the cutting line ~~(43)~~ between mutually adjacent surface part-regions ~~(59)~~ along which at least the material-removing unit ~~(6)~~ is moved by the handling unit ~~(7)~~ is fixed by means of the control unit ~~(9)~~.

Claim 17 (Currently Amended): Method as claimed in claim 1, wherein the support device ~~(3)~~ for the stamp pad ~~(4)~~ and the pad parts ~~(11)~~ on a base plate are scored along the cutting line ~~(43)~~ simultaneously with the cutting process of the stamp pad ~~(4)~~ by the material-removing unit ~~(6)~~ and/or is partially severed at retaining projections in the region of the processing surface ~~(39)~~.

Claim 18 (Currently Amended): Method as claimed in claim 1, wherein the effector unit ~~(19)~~ or individual components of the effector unit ~~(19)~~ are displaced and positioned in an XY plane, ~~in particular in a Cartesian co-ordinate system based on two co-ordinates,~~ by means of the handling unit ~~(7)~~ controlled by the control unit ~~(9)~~.

Claim 19 (Currently Amended): Method as claimed in claim 1, wherein the surface part-regions ~~(59)~~ are set from an input and/or output device ~~(61)~~ co-operating with the control unit ~~(9)~~.

Claim 20 (Currently Amended): Method as claimed in claim 1, wherein a diagram ~~(61c)~~, in particular of a stamp surface of a stamp plate, is displayed at ~~the input and/or output device (61)~~, in particular an output unit ~~(61a)~~ of a computer unit ~~(62)~~ such as a personal computer for example, and the diagram ~~(61c)~~ is divided into several part regions ~~(66, 67)~~ via ~~the an~~ input and/or output device ~~(61)~~, in particular the input unit ~~(61b)~~.

Claim 21 (Currently Amended): Method as claimed in claim 20, wherein the part regions ~~(66, 67)~~ are divided by setting several engraved patterns to be formed and applied to the diagram ~~(61c)~~, for example characters, and these engraved patterns are then formed on a stamp plate preferably by means of the material-removing unit ~~(6)~~.

Claim 22 (Currently Amended): Method as claimed in claim 19, wherein the surface part regions ~~(59)~~ and cutting lines ~~(53)~~ on the stamp pad ~~(4)~~ for cutting the stamp pad ~~(4)~~ into pad parts ~~(11)~~ are fixed depending on the number and shape of the part regions ~~(66, 67)~~ or engraved patterns by means of the control unit ~~(9)~~.

Claim 23 (Currently Amended): Method as claimed in claim 1, wherein the control and/or regulating procedures and computing routines of the control unit ~~(9)~~, for example fixing the cutting lines ~~(43)~~, the surface part regions ~~(59)~~, positioning the handling unit ~~(7) etc..~~, are run by software means.

Claim 24 (Currently Amended): Method as claimed in claim 1, wherein, once the part regions ~~(63, 64)~~ or engraved patterns have been fixed by means of the input and/or output device ~~(61)~~, the regions or cutting lines are automatically divided by the

software means in order to produce the pad parts ~~(11)~~—and/or stamp plate.

Claim 25 (Currently Amended): Method as claimed in claim 1, wherein material is removed by the material-removing unit—~~(6)~~ by energy ~~(34)~~—irradiated from a radiation source ~~(33)~~, in particular a laser beam ~~(38)~~ of a laser system ~~(36)~~.

Claim 26 (Currently Amended): Processing device—~~(1)~~, at least incorporating a material-removing unit—~~(6)~~ and a handling unit—~~(7)~~, whereby at least one operating head—~~(10)~~ of the material-removing unit—~~(6)~~ can be adjusted, in particular moved, by means of the handling unit ~~(7)~~—at least in an XY plane, and the handling unit ~~(7)~~—is connected to a control unit ~~(9)~~—in order to control and/or regulate it, wherein the processing device ~~(1)~~—has an ink dispenser unit ~~(46)~~—for dispensing stamping ink ~~(47)~~—as required, in particular inking fluids.

Claim 27 (Currently Amended): Processing device as claimed in claim 26, wherein the handling unit ~~(7)~~—is designed to displace at least one outlet orifice ~~(55)~~—of the ink dispenser unit ~~(46)~~—relative to a workpiece holder—~~(8)~~, for example.

Claim 28 (Currently Amended): Processing device as claimed in claim 26, wherein the ink dispenser unit—~~(46)~~ has at least one dispensing unit ~~(48)~~—with one or more dispenser nozzles ~~(49)~~ for stamping ink—~~(47)~~.

Claim 29 (Currently Amended): Processing device as claimed in claim 26, wherein in order to set up an effector unit ~~(19)~~ for co-operating with the handling unit—~~(7)~~, at least the dispensing unit ~~(48)~~—of the ink dispenser unit ~~(46)~~—and/or at least the operating head ~~(10)~~—of the material-removing unit ~~(6)~~

co-operates with it and the latter are preferably disposed on a retaining unit ~~(32)~~ of the effector unit ~~(19)~~ and are coupled therewith in displacement.

Claim 30 (Currently Amended): Processing device as claimed in claim 26, wherein the effector unit ~~(19)~~, ~~in particular the retaining unit (32)~~, is designed so that it can be positioned and displaced by means of the handling unit ~~(7)~~.

Claim 31 (Currently Amended): Processing device as claimed in claim 26, wherein the ink dispenser unit ~~(46)~~ has at least one outlet orifice ~~(55)~~ in the form of a discharge passage ~~(54)~~ for dispensing the stamping ink ~~(47)~~.

Claim 32 (Currently Amended): Processing device as claimed in claim 31, wherein the outlet orifice ~~(55)~~ is disposed on the dispenser nozzle ~~(49)~~ and the outlet orifice ~~(55)~~ has a flow connection to at least one ~~housing chamber for the stamping ink, in particular an ink container (51)~~.

Claim 33 (Currently Amended): Processing device as claimed in claim 26, wherein the ink dispenser unit ~~(46)~~ has several nozzles ~~(49)~~ with outlet orifices ~~(55)~~.

Claim 34 (Currently Amended): Processing device as claimed in claim 31, wherein one or more outlet orifices ~~(55)~~ of the dispenser nozzles ~~(49)~~ each have a flow connection to a flow passage ~~(52)~~ for stamping ink ~~(47)~~ in fluid lines ~~(50)~~.

Claim 35 (Currently Amended): Processing device as claimed in claim 26, wherein the at least one ink container ~~(51)~~ is preferably disposed in a stationary arrangement on a production system ~~(14)~~ and its housing chamber for stamping ink ~~(47)~~

preferably has a flow connection via at least one fluid line ~~(50)~~ to the outlet orifice or orifices ~~(55)~~.

Claim 36 (Currently Amended): Processing device as claimed in claim 26, wherein the ink dispenser unit ~~(46)~~ has a metering unit ~~(67)~~ to enable controlled dispensing of stamping ink ~~(47)~~.

Claim 37 (Currently Amended): Processing device as claimed in claim 36, wherein the metering unit ~~(67)~~ is provided in the form of a pressure generator ~~(68)~~, which is actively connected to the ink delivery system, ~~in particular the ink containers (51) and/or the fluid lines (50) and/or the discharge passage (54),~~ at least in the region of the outlet orifice ~~(55)~~.

Claim 38 (Currently Amended): Processing device as claimed in claim 26, wherein a shut-off device ~~(70)~~, ~~in particular a check valve (71)~~, is provided, preferably in the region of the outlet orifice ~~(55)~~ in the ink delivery system, ~~in particular the dispenser nozzle (49) or the fluid line (50)~~, in order to provide a fluid-tight seal of the outlet orifice ~~(55)~~.

Claim 39 (Currently Amended): Processing device as claimed in claim 26, wherein a housing chamber ~~(53)~~ of the at least one dispenser nozzle ~~(49)~~ has a flow connection or can be placed in a flow connection with several ink delivery systems, ~~in particular flow passages (52)~~.

Claim 40 (Currently Amended): Processing device as claimed in claim 26 wherein the handling unit ~~(7)~~ has at least one guide system ~~(26, 28)~~ and at least one drive mechanism ~~(22, 29)~~ for displacing and positioning preferably the effector unit ~~(19)~~.

Claim 41 (Currently Amended): Processing device as claimed in claim 26, wherein the drive mechanism ~~(22, 29)~~ is actively connected to the control unit ~~(9)~~ for control and/or regulation purposes and the drive mechanism ~~(22, 29)~~ is designed for adjusting and moving a support arm ~~(25)~~ and/or the retaining unit ~~(31)~~ of the effector unit ~~(19)~~ as necessary by means of the guide system ~~(26, 28)~~.

Claim 42 (Currently Amended): Processing device as claimed in claim 26, wherein the control unit ~~(9)~~ has a memory unit in which software means are stored.

Claim 43 (Currently Amended): Processing device as claimed in claim 26, wherein the control unit ~~(9)~~ is provided in the form of an input and/or output unit ~~(61)~~, ~~in particular~~ a of the computer unit ~~(62)~~, connected via an interface to the processing device ~~(1)~~, ~~in particular the material-removing unit (6) and/or the handling unit (7) and/or the ink delivery system (46)~~.

Claim 44 (Currently Amended): Processing device as claimed in claim 26, wherein the material-removing unit ~~(6)~~ is provided in the form of a ~~radiation source (33)~~, ~~in particular~~ a laser system ~~(36)~~.